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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,665	11/26/2003	Marc Kevin Jordan	SIG000105	6524

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EXAMINER	
PATEL, HARI	

ART UNIT	PAPER NUMBER
2115	

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/723,665	JORDAN ET AL.	
	Examiner	Art Unit	
	Hari Patel	2115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 26 are presented for examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 2, 3, 14, 15 and 16 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 1 recites the limitation "the multiple function handheld device" in lines 7-8 (emphasis added by Examiner). There is insufficient antecedent basis for this limitation in the claim.

5. Claim 2 recites the limitation "the second boot algorithm" in line 11. There is insufficient antecedent basis for this limitation in the claim.

6. Claim 3 recites the limitation "the functional algorithms" in line 1. There is insufficient antecedent basis for this limitation in the claim. It is unclear if these algorithms (emphasis added by Examiner) refer to the algorithm from the accessible memory and the accessible host.

7. Claim 14 recites the limitation "the multiple function handheld device" in lines 10-11 (emphasis added by Examiner). There is insufficient antecedent basis for this limitation in the claim.

8. Claim 15 recites the limitation "the second boot algorithm" in line 11. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 16 recites the limitation "the functional algorithms" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. It is unclear if these algorithms (emphasis added by Examiner) refer to the algorithm from the accessible memory and the accessible host.

Claim Objections

10. Claims 1, 3, 11, 12, 13, 14, 16, 24, 25, and 26 are objected to because of the following informalities:

Claim 1, line 16 recites "operable coupled". It is believed that the limitation was intended to recite, "operably coupled" .

Claim 3, 11 – 14,16, and 24 – 26 contain the same deficiency as that described with respect to Claim 1. It is incumbent upon Applicant to ensure any amendment addresses these deficiencies.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 1, 5 – 7, 9 – 14, 17 – 20, and 22 - 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawano et al (U.S. Patent No. 6,544,126), in view of Kawade et al (U.S. Patent No. 6,839,835).

13. As per Claim 1, Sawano et al. (hereinafter, referred to as "Sawano") teach a method for booting up a multiple function device *(portable game machine – col. 5, lines 45-52; and POWER-ON / INITIALIZATION – Fig. 6, Step 1)*, the method comprising:

determining a configuration state of the multiple function device *(Fig. 6 – steps S3 and S5; and col. 11, lines 6-9, where the state of an existing cartridge is the configuration state)*;

selecting one of a plurality of functional modes based on the configuration state *(depending on whether or not the cartridge is in the portable gaming machine, the portable gaming machine can go into "download mode", therefore, at least one other mode, inherently, must exist; [i.e.- if the cartridge is inserted, the portable gaming machine can go into a "play mode"] – col. 16, lines 8-12);*

accessing a memory to retrieve a functional algorithm corresponding to the configuration state *(col. 11, lines 9-13)*;

when the functional algorithm is not executable, determining whether the multiple function device is operably coupled to a host *(col. 11, lines 15-26 and Fig. 6, step S9)*;

when the multiple function device is operably coupled to the host, downloading the functional algorithm from the host *(Fig. 6, steps S11-S13; and col. 11, lines 27-37)*; and

executing the functional algorithm *(col. 11, lines 49-54)*.

14. Sawano, however, does not teach that the multiple function device accesses its own memory to retrieve a functional algorithm corresponding to the one of the plurality of functional modes. Also, Sawano does not teach a step of determining whether the functional algorithm is executable or not. Specifically, Sawano teaches a multiple function device that accesses the memory of a game cartridge to retrieve a functional algorithm corresponding to the one of plurality of functional modes, and when the functional algorithm is not executable, the multiple function device checks to see a connection to a host exists. If so, the functional algorithm is downloaded from the host and is executed at the multiple function device. Sawano fails to teach that the multiple function device accesses its own integrated memory and whether it checks to see whether the algorithm is executable or not.

15. Kawade et al. (hereinafter, referred to as "Kawade") also teach a method for booting *(col. 2, lines 34-36 – an IPL or Initial Program Load is a term sometimes used in place of "booting up")* a multiple function device *(col. 7, lines 21-25)*, the method comprising:

accessing memory of the multiple function device to retrieve a functional algorithm corresponding to one of a plurality of functional modes *(program is checked in ROM before downloading program from an external source - col. 6, lines 11-14; based off of an operation mode – col. 3, lines 4-15);*

determining whether the functional algorithm is executable *(col. 6, lines 11-14)*;

16. It would have been obvious to one of ordinary skill in the art to combine the teachings of Sawano and Kawade because they both teach a method of booting a multiple function device, the method comprising determining a configuration state, selecting a functional mode based on the configuration state, retrieving an algorithm from a memory. Kawade's teaching of accessing memory of the multiple function device shows that it checks for the algorithm stored on the memory of the device itself, not an algorithm stored on an external component. Kawade's teaching of determining whether the functional algorithm is executable allows the multiple function device to seek an alternate means of booting if the algorithm is not executable.

17. As per Claim 5, it would have been obvious to one of ordinary skill in the art that downloading the functional algorithm occurs prior to expiration of a time-out period

when the multiple function device is operably coupled to the host because otherwise, the functional algorithm would not be executable if a time-out session occurred before completion of the download.

18. As per Claim 6, it would have been obvious to one of ordinary skill in the art to shut down the multiple function device after expiration of a time-out period when the multiple function device is not operably coupled to the host. This would have been obvious because if the multiple function device is waiting for execution of an algorithm that cannot be executed, the multiple function device will unnecessarily consume power in the time period of waiting.

19. As per Claim 7, it would have been obvious to one of ordinary skill in the art that the configuration state includes booting inputs that comprise boot pins and wherein a location of the functional algorithm is specified by the configuration state.

20. As per Claim 9, it is known in the art that a multiple function device can cause a boot-up routine if it either connected or disconnected to/from a host. Therefore, it would have been obvious to one of ordinary skill in the art that an event that triggers booting up comprises a change in status of an operable connection between the multiple function device and the host.

21. As per Claims 10 – 13, it would have been obvious to one of ordinary skill in the art that the multiple function device is a certain state when coupled to a host and in

another state when not connected to the host. In order for the multiple function device to perform different tasks (retrieve algorithms from a particular memory, whether it be its own or from an external device), one of at least two states must be present so the multiple function device is able to distinguish its function.

22. Claims 14, 17 – 20, and 22 – 26 are directed to an apparatus for booting up a multiple function device as set forth in Claims 1, 5 – 7, and 9 – 13. Since Sawano and Kawade teach the claimed booting up a multiple function device method, they also teach the apparatus for booting up a multiple function device. The multiple function device would inherently require a processing module, ROM, and memory.

23. Claims 2, 3, 4, 8, 15, 16, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawano et al (U.S. Patent No. 6,544,126), in view of Kawade et al (U.S. Patent No. 6,839,835), and further in view of Lian et al. (U.S. PG-PUB No. 2003/0176935).

24. As per Claim 2, Sawano and Kawade teach a multiple function device with a plurality of functional modes as mentioned above, however, Sawano and Kawade do not specifically disclose that at least two of the functional modes are of: a digital audio player; a file storage; a digital multimedia player; an extended memory device; a digital audio recorder; a digital multimedia recorder; a personal data assistant; and an

extended memory device. Specifically, Sawano and Kawade both teach a multiple function device that has a plurality of functional modes. Sawano's disclosure of a portable game machine could comprise a digital audio player, file storage, digital multimedia player, etc., as other portable game machines available today, but fails to teach so specifically.

25. Lian et al. (hereinafter, referred to as "Lian") disclose a multiple function device *(paragraph [0026], lines 4-7)* that selects one of a plurality of functional modes based on the configuration state *(based on the multiplexing circuit, the multiple function devices determines whether it is in an audio or data mode – paragraph [0022], lines 1-3)* where the functional modes are of a digital audio player and a file storage *(paragraphs [0004] and [0006])*.

26. It would have been obvious to combine the teachings of Sawano – Kawade and Lian because they all teach a multiple function device having a plurality of functional modes. Lian's disclosure of the multiple function device comprising a digital audio mode and file storage mode teaches the specific modes of a plurality of modes.

27. As per Claim 3, it would have been obvious to one of ordinary skill in the art that the functional algorithms configure the multiple function device as an extended memory device when the multiple function device is operably coupled to the host because the Applicant's Admission of Prior Art (AAPA) teaches that thumb drives can be used for

extended memory functionality *(Specification, paragraph [0005], line 6)*. It is well known in the art that a thumb drive has an integrated USB interface for connecting to a host computer. Lian's teaching of a multiple function device shows that it may be used as a thumb drive *(Figure 2)*.

28. As per Claim 4, it would have been obvious to one of ordinary skill in the art for the multiple function device, or extended memory, to receive instructions from a operably coupled host, the instructions for repairing the functional algorithm corresponding to the plurality of functional modes.

29. As per Claim 8, it would have been obvious to one of ordinary skill in the art that the location of the functional algorithm corresponds to an accessible memory location selected from either a USB extended memory; flash memory; EPROM (or EEPROM); I2C memory device; removable disk memory; or hard-drive memory. It is well known that many portable audio players that also function as data storage devices, as disclosed by Lian, use a USB extended memory or flash memory as means for storage of instructions or algorithms. It is also well known that I^2C interface, removable disk memory, and hard-drive memory can also be used for multiple function devices as an accessible memory location used, in part, for storage of functional algorithms.

30. Claims 15, 16 and 21 are directed to an apparatus for booting up a multiple function device as set forth in Claims 2, 3, and 8. Since Sawano, Kawade, and Lian

teach the claimed booting up a multiple function device method, they also teach the apparatus for booting up a multiple function device. The multiple function device would inherently require a processing module, ROM, and memory.

Conclusion

31. Any inquiry concerning this communication from the examiner should be directed to Hari Patel whose telephone number is 571-272-2743. The examiner can normally be reached on Monday – Thursday from 8:00am – 5:30pm and every other Friday from 8:00am – 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee, can be reached at 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of the application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

Hari Patel
Examiner
Art Unit 2115